**End Product**

* Create a way to share your observations and connections between the organisms with others. Examples include a podcast, movie, powerpoint, glog, wiki pages (create a new set linked to the page), etc.
* It must be scientifically thorough and accurate.  The science content is the most important thing.

-there should be a solid visual component.  Feel free to include pictures, diagrams, etc.

-there are 2 important overarching relationships.  How can you creatively show them?

         a) the relationship between structure and function

         b) the relationship amongst the levels of organization.

**General requirement for all sections:**

* Ask a deep question of quality at each section and then answer/share your source. Be sure to discuss all information in your own words that you found out about your question. Your source is not Google. It needs to be the actual web address. Use something other than Wiki answers and Yahoo answers .

**Sections:**

**You will be answering these sections using every organism you have been given for this dissecting unit.**

**I. Muscles:**

**Using the vocab list, find a pair of antagonistic muscles, muscles that provide stability, and a core muscle.**

Muscle list: pectoralis, deltoid, flexor carpi radialis, flexor carpi ulnaris, triceps brachii, rectus abdominus, triceps femorus, semimembranosus, semitendinosus, achilles tendon, tarsus anticus, tarsus posticus, plantar fascia, latissimus dorsi, longissimus dorsi, dorsalis scapulae, coccygeoilicus, gluteus, gastrocnemius, external oblique, Sartorius.

**Vocabulary list: tendon, ligament, origin, insertion, belly (of muscle), abduction, adduction, extension, flexion**

1. Move and manipulate the various appendages. Describe their movement. What do you find interesting about each of these?
2. Where do the muscles attach to the bone?
3. How does where they attach determine the movement of the appendage?
4. What are some of the differences between the muscle and the tissue where the muscle attaches to the bone?
5. Are there differences in the ways different muscles attach within the same organism?
6. How are the attachments of the muscles similar and different among all the organisms including human muscles?
7. What composes the tissue that connects the muscle to bone?

**II. Circulating needed materials:**

1. How does O2 get in and out?
2. How is O2 and other materials moved throughout the body?
3. Draw a diagram of the movement of O2 and other materials through this system (or take a picture and mark up the movement).

**III. Digestive:**

1. Compare and contrast the various organs and their order through the body. What role does each of them play (function, physical or chemical action?)
2. Which organisms have similar organs in the digestive system? How does that compare to the types of food that they eat?
3. How is the organ adapted to provide as many reactions as possible in the shortest amount of space?
4. How are the same design features found in the parts of the cell as well as in other organisms and the environment?

**IV. General Body structure:**

1. Explore the type of symmetry that each organism has.
2. Label a picture of the organism with these terms: anterior, posterior, dorsal, ventral, lateral, head, thorax, abdomen.
3. What is the advantage of various structures found on the body such as appendages, mouth parts, sensory antennae, skin receptors, etc. Discuss all the different types of receptors.

**V. Feedback from the environment:**

1. What particular sensory structures does the organism have? What advantage exists for that specific structure? Are there similarities to structures found in the other organisms?
2. How has evolution been part of their survival?
3. Follow the taxonomy of each of the organisms from kingdom to species.
4. What are their cousins? What is one of their past ancestors (extinct) of which they share something in common?

**VI. Additional pig anatomy**

1. Organism:  Give an example of a simple structure/function relationship pertaining to the human body.  The structure/function relationship should be visible from the outside of the body (don’t use parts that are on the inside).  Be sure your explanation includes a discussion of the structure, function, and the relationship between the two.
2. Organ System: Pick a human organ system.  Describe what role it plays in maintaining homeostasis.  Also describe how it works with at least 2 other systems.  (For example, the excretory system works closely with the circulatory system.  The circulatory system brings blood to the kidneys, which are the main organ of the excretory system.  The kidneys filter the blood, creating urea, which is then combined with water to create urine.  The urine is then released form the body.)
3. Organ: Pick an organ within your organ system from above.  What is this organ’s specific function?  How does its structure relate to its function?  Be sure your explanation includes a discussion of the structure, function, and the relationship between the two.
4. Tissue: Discuss the tissues that make up your organ mentioned above.  How do they work together?  Which of the 4 types of tissues are present? (epithelial, connective, nervous, and muscle)
5. How are the cells of the above organ/tissue specialized (again, relating structure and function).  What is the size/shape of the cell?  Are there any special organelles?  Are any organelles present in larger quantities?